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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,106	11/28/2000	Francois Grien	677-18	7675

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Nixon & Vanderhye
8th Floor
1100 North Glebe Road
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EXAMINER

MOORTHY, ARAVIND K

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/673,106

Applicant(s)

GRIEU ET AL.

Examiner

Aravind K Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2000.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 are pending in the application.
2. Claims 1-13 have been rejected.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract exceeds the 150-word limit.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e)

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and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or

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processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

4. The specification of the application is missing the headings for the background of the invention, summary of the invention and the detailed description of the preferred embodiments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 4, 5 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Ziarno U.S. Patent No. 5,869,825.

As to claim 1, Ziarno discloses a method of modifying the content of the non-volatile memory of a microcircuit card, in particular a contactless card. Ziarno discloses that the card is temporarily coupled to a terminal while a transaction is being executed [column 3, lines 1-32]. Ziarno discloses a remote ticketing transaction [column 6 line 57 to column 7 line 2]. Ziarno discloses the transaction including the terminal applying to the card a plurality of modification commands. Ziarno discloses that each comprising at least one operation of recording in the card memory a respective data item designated by the command [column 5, lines 7-24]. Ziarno discloses the various data items recorded in this way being mutually interdependent. Ziarno discloses on receiving corresponding respective commands from the terminal, it modifies the contents of the card memory by provisionally recording in the card memory each of the interdependent items of information without losing prior values corresponding to the items [column 5, lines 25-53]. Ziarno discloses that the modifications are finalized either by all of them being confirmed or by all of them being discarded. Ziarno discloses such that for

subsequent operations, the commands executed will either all have been taken into account, or else all of them will be without effect [column 6, lines 46-56].

As to claim 4, Ziarno discloses an in-session mode. Ziarno discloses an out-of-session mode in which the makings of recordings are not confirmed [column 5, lines 6-24].

As to claim 5, Ziarno discloses an authentication function combined with the function of finalizing step. Ziarno discloses data to be discarded in the event of authentication failing [column 6, lines 46-56].

As to claim 11, Ziarno discloses an optional inhibit attribute that if the card executes such a command in-session the modifications performed by the command take effect independently [column 8 line 55 to column 9 line 4].

As to claim 12, Ziarno discloses that the terminal executes an action following confirmation by the card. Ziarno discloses that in the event of the action being properly performed by the terminal, ratification information is recorded in the card suitable for subsequent accessing by reading [column 10 line 57 to column 11 line 18].

As to claim 13, Ziarno discloses that the recording command is an implicit command. Ziarno discloses that any command received by the card is interpreted as an order for recording ratification information in the card [column 11, lines 19-32].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarno U.S. Patent No. 5,869,825 as applied to claim 1 above, and further in view of Fujisaki U.S. Patent No. 4,877,945.

As to claims 2 and 3, Ziarno does not teach a flag confirming proper execution is recorded in the memory of the card. Ziarno does not teach that when the card subsequently receives a command requiring at least one of the data items written or the value corresponding thereto to be read and/or modified. Ziarno does not teach that the card begins by examining the state of the flag, and if it has not been recorded, the card ignores or cancels the provisional recordings previously made and executes the command on the basis of the prior values corresponding to the data items. Ziarno does not teach that when the card examines the state of the flag, and if the flag has been recorded, the card executes operations for copying the provisional writes.

Fujisaki teaches a flag confirming proper execution is recorded in the memory of a card. Fujisaki teaches that when the card subsequently receives a command requiring at least one of the data items written or the value corresponding thereto to be read and/or modified, the card begins by examining the state of the flag, and if it has not been recorded, the card ignores or cancels the provisional recordings previously made and executes the command on the basis of

the prior values corresponding to the data items. Fujisaki teaches that when the card examines the state of the flag, and if the flag has been recorded, the card executes operations for copying the provisional writes [column 2, lines 10-56].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno so that a flag confirmed proper execution was recorded in the memory of the card. When the card subsequently received a command requiring at least one of the data items written or the value corresponding thereto to be read and/or modified, the card would have examined the state of the flag, and if it had not been recorded, the card ignored or cancelled the provisional recordings previously made and executed the command on the basis of the prior values corresponding to the data items. When the card examined the state of the flag, and if the flag had been recorded, the card executed operations for copying the provisional writes.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno by the teaching of Fujisaki because it lets the operator know that data recording in the memory is hindered and it excludes erroneous recording on the card [column 1 line 65 to column 2 line 2].

7. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarno U.S. Patent No. 5,869,825 as applied to claim 1 above, and further in view of Ohashi et al U.S. Patent No. 5,761,309.

As to claims 7 and 9, Ziarno does not teach that when the card receives from the terminal commands for modifying the content of the memory that it includes verification of a cryptographic certificate. Ziarno does not teach that the verification is performed if the

command is received out-of-session, and it is not performed if the command is received in-session.

Ohashi et al teaches when a card that receives from the terminal commands for modifying the content of the memory that it includes verification of a cryptographic certificate. Ohashi et al teaches that the verification is performed if the command is received out-of-session, and it is not performed if the command is received in-session [column 6, lines 13-40].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno so that when a card that received from the terminal commands for modifying the content of the memory that it included verification of a cryptographic certificate. The verification would have been performed if the command was received out-of-session, and it was not performed if the command is received in-session.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno by the teaching of Ohashi et al because it provides a high level of confidentiality when secret information is transmitted [column 1 line 61 to column 2 line 7].

8. Claims 6, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziarno U.S. Patent No. 5,869,825 as applied to claim 1 above, and further in view of Vanstone U.S. Patent No. 6,178,507 B1.

As to claims 6, 8 and 10, Ziarno does not teach that the authentication is performed by the card that authenticates the terminal and/or the data interchanged between the terminal and the card. Ziarno does not teach the card checking a cryptographic certificate produced by the terminal and transmitted to the card, and confirming the modifications only if the certificate is

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recognized as being correct. Ziarno does not teach that the authentication is performed by the terminal that authenticates the card and/or the data interchanged between the terminal and the card. Ziarno does not teach that the card produces and transmits a cryptographic certificate in conditional manner to the terminal, if and only if the modifications have been confirmed.

Vanstone teaches mutual authentication between a terminal and a smart card using certificates [column 3 line 37 to column 4 line 37].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno so that the terminal and the smart card would have mutually authenticated themselves before an transaction took place.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Ziarno by the teaching of Vanstone because it ensures that transactions take place on a trusted smart card as well as a trusted terminal.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy
March 30, 2004


AYAZ SHEIKH
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